

Springfield Road Landfill
Henrico County
Environmental Excellence
2003 Annual Report

Background:

The Springfield Road Landfill was officially accepted into the Environmental Excellence (E2) program on February 21, 2003. The purpose of this report is to revisit our facility's objectives and targets and determine our success in meeting these goals for the year. Our intention is always to demonstrate overall improvement in the operation of our environmental management system from the previous year.

Although our annual period should be from February 21st to February 20th, based on the date of our acceptance into the program, we will be using the calendar year as our annual reporting period for simplicity.

Our overall goal and mission is achieve the highest level of service to the citizens of Henrico County while being proactive in protecting human health and the environment. In achieving this goal, we maintain compliance with applicable federal, state and local laws and regulations; landfill personnel will work to improve the appearance of the facility and be a good neighbor; we try to use our undeveloped land and closed areas for the benefit and support of wildlife; and we educate the public by promoting recycling and reuse whenever possible as an alternative to disposal.

Below our objectives and targets identified on our E2 application and our progress in calendar year 2003

Objectives and Targets for Environmental Impacts

1. Provide training to personnel filling landfill equipment and contractor refilling tanks about proper filling techniques and spill response procedures.

We conducted this training for the automotive service workers who use the diesel fuel tanks to fill the on-site equipment. A new spill control drum with a variety of spill containment products was placed at the diesel fueling station in February 2003.

2. Replace the two 500-gallon single walled diesel fuel tanks with a single 1,000-gallon double walled tank with protective bollards.

These tanks were replaced with the double walled tank and bollards in February 2003.

3. Provide training to personnel filling hydraulic oil in equipment about proper filling techniques and spill response procedures.

- Training was conducted with the automotive service workers in a regularly scheduled safety meeting. New automotive maintenance employees will be trained in this practice as well.*
4. Replace existing 250-gallon tank with a larger tank. Look into making it easier for residents to deposit used oil and a program to accept oil filters.
- The previously used 500-gallon diesel fuel tank was placed in service at the citizen recycling center for use as a used oil receptacle. As a result of this higher capacity, the chance of oil overtopping the tank through regular use by the residents has been reduced and the number of times the contractor needs to come and remove the oil, and subsequent chance for spillage, has been reduced.*
5. Evaluate benefits and costs of switching to a vegetable oil substitute for hydraulic oil and purchasing heavier duty hoses that may withstand holes better.
- Switching to a vegetable oil substitute for hydraulic oil has not been well received by on-site automotive service workers. We are working with Central Automotive Maintenance in further evaluation of the vegetable based hydraulic oil and the heavier duty hoses.*
6. Evaluate procedures for changing oil in landfill equipment and its related clean-up procedures at the service area. Recommend improvements, if needed in these procedures.
- The fluids for vehicles are mostly changed in our Central Automotive Maintenance garage. When fluids are changed at the landfill, they are conducted on the covered wash pad. Any spillage will flow through an oil/water separator. No improvements are necessary to these procedures.*
7. Evaluate equipment inspection programs and implement modifications or training to identify leaks and procedures to repair.
- Pre-trip inspections take place prior to each equipment operator's shift. At several safety meetings the procedures for checking for leaks and notifying the automotive service workers were discussed.*
8. Provide training on filling drums and provide a secondary containment structure for the drums.

Training was provided on the proper way to fill drums with household hazardous waste. New funnels were purchased for this procedure. The drums were moved underneath cover and in secondary containment sumps at the recycling center. A separate stand alone covered enclosure is being evaluated.

9. Conduct monthly inspections of the integrity of the final cover. Repair where necessary and evaluate if additional stormwater controls are necessary to reduce the erosive forces during storm events. Establish and maintain vegetation on side slopes to stabilize the intermediate cover.

Inspections of the cover were regularly conducted. A large amount of intermediate cover was placed on the side slopes in 2003. The slopes were seeded in the spring and fall. The slopes were put to the test as a result of the heavy rains we received throughout the year and then during the hurricane in September. They were able to hold up to these conditions.

10. When possible, use natural alternatives to chemical pesticides, herbicides, and cleaning agents.

A landfill employee attained his pesticide certification in 2003. Whenever possible he uses natural pesticides and herbicides. For mosquitoes, his focus is on control of their environment through eliminating standing water instead of applying pesticides. When necessary, he follows safe and environmental friendly practices when applying chemicals in accordance with the requirements of his certification. Citrus based hand cleaners are being used at the facility. Cleaning of automotive parts is no longer performed at the landfill.

11. Replace the existing septic system and drainfield with a sewer pump station that will tie the discharge directly into the County's sanitary sewer system.

The existing septic system was taken out of service in 2004. It was replaced with a pump station and force main that now carries the sanitary sewage to the county sanitary sewer system for treatment.

12. Evaluate procedures for washing landfill equipment. Only allow pressure washing on covered wash pad to eliminate contaminated run-off.

Landfill equipment is sprayed down from the water truck on the active working face of the landfill. Over the road vehicles are washed on the wash pad by the landfill office. The discharge pipe from the wash pad has been connected to an oil/water separator which is connected to the new sanitary sewer system.

13. Conduct quarterly inspections of sediment basins and traps. Inspect facility during storm events for uncontrolled run-off.

Quarterly visual inspections are conducted quarterly of the sediment basins and traps and after heavy storm events. The largest sediment basin, SB-4 had the silt removed in August by landfill personnel. The ditches of the site were also regularly maintained.

14. Evaluate feasibility of expanding landfill gas collection and control system to other areas of the landfill.

In 2003 an engineering firm was contracted to develop a site-wide landfill gas collection and control system. This was completed in December 2003. The county is now moving forward with the bid phase for construction of the first two phases of the landfill gas system. This system is being installed on a voluntary basis to reduce landfill odors and give the opportunity for a developer to beneficially use the collected landfill gas.

15. Regularly inspect and maintain pollution control devices on equipment. Evaluate feasibility of using low emission diesel fuel.

Pollution control devices on equipment are inspected during the pre-trip inspection. All landfill equipment, even the compactor and other heavy equipment, uses the low emission over the road diesel fuel.

16. Pave additional areas that are currently gravel surfaced and evaluate using environmentally friendly dust suppressants.

In 2003 we paved approximately 1,700 linear feet of access road that previously was gravel. This has reduced the amount of dust emissions created by landfill traffic on dry days. Based on the amount of paving we performed, manufactured dust suppressants are deemed not necessary.

17. Install portable litter fencing around working face of landfill. Enforce existing laws that prohibit traveling with unsecured loads and littering. Invest in equipment that will allow litter pick-up to proceed more efficiently.

We purchased and used approximately 1,000 linear feet of litter fence. We placed signs on the landfill access road and the solid waste website reminding people to cover their loads. We purchased litter grabbers for the employees to more effectively and safely pick up litter.

18. Evaluate methods to control crows, buzzards, and starlings through noise makers, wire barriers, sonic devices, etc.

We requested a site visit from the U.S. Fish and Wildlife specialist from the Animal Damage Control Office for guidance on this issue. He stated that he would not approve any drastic control measures. His recommendation was to take a more active approach to noisemakers. We purchased a cap gun and shells designed to scare birds away. Based on costs and reported effectiveness of wire barriers and sonic devices these options were not acted upon.

Other Environmental Accomplishments During 2003

Other improvements that were accomplished during 2003 at the facility include:

- Instituting a household rechargeable battery-recycling program in conjunction with the Central Virginia Waste Management Authority by collecting these batteries at the public use area.
- Instituting a household mercury-recycling program by collecting mercury containing thermostats, thermometers, or switches from residents. The mercury container is taken to AERC Recycling solutions when full.
- Successfully managing hundreds of thousands of cubic yards of yard waste debris generated by Hurricane Isabel without negatively impacting the environment. As a benefit to the environment, hundreds of logs were given away to saw mills to be used in lumber, hundreds of tons of yard waste were given to Environmental Solutions who processed the material into high quality compost, thousands of tons of material was given to a processor who manufactured high quality mulch, hundreds of tons were used on-site for seeding operations, and hundreds of tons were given free to residents for their personal use.

Objectives and Targets for 2004

1. Further educate and promote to the public their responsibility to cover their loads to prevent litter along the road.
2. Install the first two phases of a voluntary landfill gas collection and control system.
3. Evaluate the feasibility and then solicit vendors for the beneficial use of collected landfill gas.
4. Create web page on our solid waste web site that provides information on safe and environmentally conscientious waste management practices and promotes the 3 R's, Reduce, Reuse, and Recycle.
5. Evaluate the possibility of using recycled anti-freeze in landfill equipment.

